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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/527,693

03/11/2005

Robert Hammond-Smith

MERCK-2986

7305

23599

7590

02/11/2008

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EXAMINER

DUDEK, JAMES A

ART UNIT

PAPER NUMBER

2871

MAIL DATE

DELIVERY MODE

02/11/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/527,693	Applicant(s) HAMMOND-SMITH ET AL.	
	Examiner /James A. Dudek/	Art Unit 2871	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 December 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 and 24-36 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-21 and 24-36 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Appeal Brief

Applicant's Appeal Brief filed 12/07/07 is persuasive and, therefore, the finality of the final rejection mailed 6/15/07 is withdrawn.

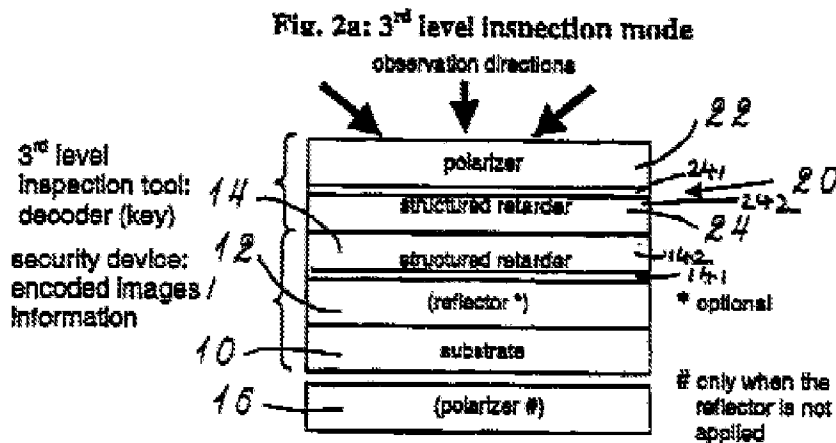
Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-21 and 24-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 6806930 B2.



Per claim 1, 930 teaches method of preparing a birefringent marking comprising: printing a polymerizable liquid crystal material [142, see first paragraph in column 6] onto at least one surface of a reflective substrate [see 10 and 12]; and polymerizing the liquid crystal material [see the second paragraph in column 6], and printing of said polymerizable liquid crystal material onto the reflective substrate induces or enhances spontaneous alignment of the polymerizable liquid crystal material on said reflective substrate, whereby a birefringent marking is formed on said reflective substrate [see second full paragraph in column 6, "...aligns the LCP material 142..."]

930 teaches printing the LC layer but does not teach an explicit printing method. However, each of the claimed methods were well known for fast and accurate printing. Further, this appears to be a complete list, and thus 930 would have to use one of these methods. Accordingly, it would have been obvious to one of ordinary skill at the time of invention to use screen printing, offset printing, dry offset printing, reel-to-reel printing, letter press printing, gravure printing, rotogravure printing, flexographic printing, intaglio printing, pad printing, heat-seal printing, inkjet printing, thermal transfer printing or printing by means of a stamp or printing plate in order to quickly and accurately print the LC layer.

Per claim 2, 061 teaches method according to claim 1, wherein the liquid crystal material is a nematic or smectic liquid crystal material [see last paragraph in column 10].

Per claims 3-4, 061 teaches method according to claim 1, wherein the substrate comprises at least one metallic or metallised layer [see first full paragraph column 4].

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Per claim 5-6, 061 teaches a method according to claim 1, wherein the substrate comprises at least one layer of reflective pigments [see last paragraph column 4].

Per claims 7-10 and 17, 061 teaches a method according to claim 1, but lacks the liquid crystal material comprises at least one compound which induces and/or enhances planar and splay alignment or use of a surfactant. However, it was well known to use planar or splay alignment in order to create the necessary retardation value and thus provide sufficient contrast. Accordingly, it would have been obvious to one of ordinary skill at the time of invention for 930 to use either splay or planar alignment.

Regarding the surfactant, 930 uses the layer 141 as an aligning layer and thus anticipates this limitation.

Per claims 11-15, 061 teaches the birefringent marking obtainable by a method according to claim 1 [see the figures].

Per claim 17, the liquid crystal is flat or planar.

Per claim 18, the LC is a marking.

Per claim 19-36, see columns 11-13.

Response to Arguments

The arguments presented in the Appeal Brief were found persuasive.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to James A. Dudek whose telephone number is 571-272-2290. The examiner can normally be reached on 9:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Nelms can be reached on 571-272-1787. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/James A. Dudek/
Primary Examiner
Art Unit 2871